

REMARKS

The claims have been amended to more clearly describe the instant invention. Support for the amendment to claim 1 can be found in the Specification on page 7, lines 13-14. Support for the adjective "amplification" to modify the primers discussed in claims 2-15 can be found in the Specification on page 8, lines 1-3. Support for the limitation that the second generation amplification primer extension products accumulate in a mathematically linear fashion can be found throughout the Specification, for example on page 18, lines 6-8, page 8, lines 1-3 and page 5, line 8. No new matter has been added.

Rejections Under 35 U.S.C § 112, second paragraph

The Examiner has rejected claims 2, 3 and 6-15 for recitation of the phrase "said first and said complement cDNA strands." The Examiner contends that this phrase lacks proper antecedent basis.

Applicants have amended the claims to consistently refer to "first strand cDNA" and "complement of said first strand cDNA." Applicants thereby request reconsideration and removal of the rejection.

The Examiner has rejected the claims 2, 3 and 6-15 as indefinite, contending that it is unclear as to whether the primers

defined in these claims at step (b) are the same as or different from the primers set forth in claim 1.

Applicants have amended the claims to clearly indicate that the primers used in step (b) are amplification primers. Applicants respectfully submit that "amplification primer" is clearly distinguishable from the primers used in claim 1. Thus, Applicants respectfully request reconsideration and removal of the rejection.

The Examiner has rejected claims 2 and 6-15 over the recitation of the phrase "primers of claim 2" because it is improper for a dependant claim to refer back to itself.

Applicants have amended the claims, deleting the phrase "primers of claim 2." Thus, Applicants respectfully request reconsideration and removal of the rejections.

Rejections Under 35 U.S.C § 102(e)

The Examiner has rejected claims 1-3, 6-13, 16-18 and 21-28 as being anticipated by Newton et al. The Examiner contends that Newton teaches a method for amplifying a target nucleic acid comprising contacting a sample nucleic acid, together or sequentially with a first primer comprising a target binding region and a polynucleotide tail, and with an amplification primer comprising a target binding region and a polynucleotide tail such that the primers anneal to the target nucleic acid and generate an amplification product. The Examiner states that the first primer

and the amplification primer can each contain a polymerization blocking moiety positioned between the target binding region and the tail. The Examiner then concludes that Newton teaches amplification methods using a first and second primer comprising a "non-replicable element."

The Examiner also contends that Newton teaches that the target sequence may be RNA or DNA and that the method of annealing primers to the template and separating the primer extension products from their templates may be repeated as many times as necessary to obtain the desired level of sequence amplification. The Examiner also states that Newton teaches that the polymerization blocking moiety may be a deoxy ribofuranosyl naphthalene or ribofuranosyl naphthalene moiety, which are considered to be derivatives of a deoxyribonucleotide or a ribonucleotide. Lastly, the Examiner contends that Newton's primers are considered to contain "cleavable elements" because all nucleotides present in the primers could be cleaved by some type of cleaving agent. Applicants respectfully traverse.

Applicants first point to the amendment to the claims indicating that the second generation amplification primer extension products accumulate in a mathematical linear fashion. This is because the second generation molecules have not incorporated an effective binding site for the primer used to produce the first

generation molecules. This differs from the Newton reference where the amplification proceeds in an exponential fashion.

The Examiner is correct that in column 2, lines 49-57 Newton indicates that separating the primer extension product from its template and contacting the single stranded molecules obtained can be repeated as many times as necessary. This passage, however, indicates that the separated primer extension products can then be contacted with the same primers to repeatedly form additional extension products. This is significantly different from the instant invention, where the second generation amplification primer extension products cannot be used as a template for the first amplification primer. That is, while Newton's primers may contain a polymerization blocking moiety, this moiety is not placed within the primer such that the second generation primer extension product cannot be used repeatedly to produce additional copies of the first generation primer extension product. This leads to the exponential accumulation of both first and second amplification extension products. As stated throughout the instant Specification, because of the placement of the non-replicable element within the primer itself, second generation amplification products can only accumulate in a linear fashion. Thus, the instant invention is intrinsically and substantially different from that of Newton. Thus, in view of the above, applicants respectfully request reconsideration and removal of the rejection.

In view of the above remarks, all of the claims remaining in the case are submitted as defining non-obvious, patentable subject matter.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant respectfully petitions for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$110.00 is attached hereto.

The Examiner is respectfully requested to enter this Reply After Final in that it raises no new issues. Alternatively, the Examiner is respectfully requested to enter this Reply After Final in that it places the application in better form for Appeal.

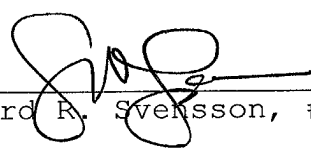
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Leonard R. Svensson (Reg. No. 30,330) at 714-708-8555 in Costa Mesa, CA to conduct an interview in an effort to expedite prosecution in connection with the present application.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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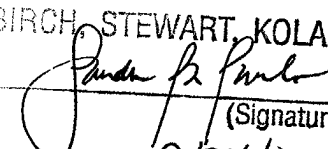
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3239-0104P

Attachment: Version with Markings to Show Changes Made

(Rev. 02/20/02)

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(Date of deposit)

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